

## **CURRICULUM VITAE**

June 2009

**NAME:** Mary M. Yoklavich

**ORGANIZATION:** National Oceanic & Atmospheric Administration  
National Marine Fisheries Service  
Southwest Fisheries Science Center  
Fisheries Ecology Division  
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Santa Cruz, CA 95060

**CONTACT:** mary.yoklavich@noaa.gov

**PRESENT POSITION:** Research Fishery Biologist, Supervisor

**DISCIPLINE:** Coastal Marine Fisheries and Habitat Ecology

**EDUCATION:** B.A., Biological Sciences, Univ. of California,  
Santa Barbara (1973)  
M.S., Marine Sciences, Moss Landing Marine Labs,  
San Francisco State University (1982)

**EXPERIENCE:** **1999-Present**, Research Fishery Biologist, Supervisor  
Habitat Ecology Team Leader, NMFS, Santa Cruz, CA  
**1991-1999**, Research Fishery Biologist, NMFS, Pacific  
Fisheries Environmental Lab, Pacific Grove, CA  
**1989-1991**, Research Associate, Moss Landing Marine  
Labs and Elkhorn Slough Foundation, CA  
**1988-1989**, Research Fishery Biologist, NMFS, Alaska  
Fisheries Science Center, Seattle, WA  
**1984-1988**, Senior Research Assistant, Oregon State  
University, College of Oceanic and Atmospheric  
Sciences, Newport, OR  
**1980-1984**, Research Assistant, Oregon State  
University, Oceanic & Atmospheric Sciences

**RESEARCH INTERESTS:** Species-habitat associations. Developing methods to  
characterize deepwater habitats. Stock assessment  
improvements. Marine protected areas. Environmental  
effects on coastal marine fishes.

**HONORS AND AWARDS:**

- NMFS Best Paper Award, Fishery Bulletin, 2008
- Best Poster Presentation, Western Groundfish Conference, 2008
- DOC Bronze Medal-Superior Federal Service for EFH, 2007

- National Outdoor Book Award, Nature Guidebook Category, Honorable Mention, 2003
- NOAA Fisheries Employee of the Year Award, 2002
- NMFS Special Service Achievement Award, 2002
- Fellow, American Institute of Fishery Research Biologists, 2002
- DOC Bronze Medal-Superior Federal Service, (with FOCI group), 2002
- Distinguished Fellow, Science and Technology, CA State University Monterey Bay, 2000
- DOC Bronze Medal-Superior Federal Service, 1998
- Nominee for Pew Fellows Program in Marine Conservation, 1998
- NOAA Monterey Bay National Marine Sanctuary Science Award, 1998
- Best Research Poster, Monterey Bay National Marine Sanctuary Annual Meeting, 1998 and 2002
- NOAA Performance Awards: 1988, 1992-98, 2002-03
- NMFS Honorable Mention: Outstanding Publication Fishery Bull., 1987

#### **SELECTED SERVICE ON SCIENTIFIC COMMITTEES:**

- NOAA-NMFS Steering Committee for National Habitat Assessment Workshop, 2009
- Chair, National Habitat Assessment Improvement Plan Committee, 2008-present
- Pacific Fisheries Management Council, EFH Review Committee, 2008-present
- Co-chair, Western Groundfish Conference, 1998 and 2008
- American Fisheries Society - Award of Excellence Committee, 2007
- NOAA Deep Sea Coral Committee, 2006-present
- State of California Marine Life Protection Act Initiative, Appointed Baseline Science-Management Panel Member, 2006
- State of California Marine Life Protection Act, Appointed Master Plan Team, 2000-2004; Appointed Science Advisory Team, 2005-2006
- Pacific Fisheries Management Council, Advisory Committees on Marine Reserves, 1999-2001; West Coast Groundfish EFH, 2002-2006
- National Center for Ecological Analysis and Synthesis (NCEAS) "Development of Tools for the Practical Design of Marine Reserves" Working Group Member, 2002-2004
- NOAA-NMFS Protected Resources panel member for "Candidate Species" to the Threatened and Endangered Species List, 1997-2002
- NOAA-NMFS Essential Groundfish Habitat Core Team, 1996
- NOAA-NMFS Advisory Team For Gear Impacts, 1998
- Convened CalCOFI Annual Symposium on Marine Reserves, 1998
- Convened Workshop: Marine Refugia For West Coast Rockfish, 1997
- AFS-Outstanding Mar. Fish. Biol. Nom. Comm., 1994-96; chair 1995-96
- Monterey Bay National Marine Sanctuary Research Activities Panel, 1993-present; co-chair Monterey Bay Research Symposium, 1995
- Elkhorn Slough Nat'l Ecol. Research Reserve Committee, 1993-2001; member of Elkhorn Slough Foundation Governing Board, 1996-1999
- American Fisheries Society, Marine Section Secretary/Treas. 1992-94

## **SERVICE ON GRADUATE STUDENT COMMITTEES:**

Member of Graduate Advisory Committees:

Moss Landing Marine Laboratories Master's in Marine Science:

Sullivan, D.E. (Marine Geology, 1994); Nishimoto, M. (Ichthyology, 1996); Johnson, K. (Ichthyology, 1997); Daly B. (Ichthyology, 1997); Schlining, K. (Invertebrate Zoology, 1999); Field, J. (Ichthyology, 2005)

Washington State University, Environmental Science Program:

Camellia Bianchi (current); Kaitlin Graiff (2009)

## **PUBLICATIONS:**

1. O'Farrell, M.R., M.M. Yoklavich, and M.S. Love (2009) Assessment of habitat and predator effects on dwarf rockfishes (*Sebastes* spp.) using multi model inference. *Environ. Biol. Fishes* 85:239-250. DOI 10.1007/s10641-009-9489-0.
2. Love, M.S., M. Yoklavich, and D.M. Schroeder (2009) Demersal fish assemblages in the Southern California Bight based on visual surveys in deep water. *Environ. Biol. Fishes* 84:55-68.
3. Yoklavich, M. M. and V. O'Connell (2008) Twenty years of research on demersal communities using the Delta submersible in the Northeast Pacific. In: J.R. Reynolds and H.G. Greene (eds.) *Marine Habitat Mapping Technology for Alaska*. Alaska Sea Grant College Program, University of Alaska Fairbanks. DOI 10.4027/mhmta.2008.10:143-155.
4. Black, B.A., G. W. Boehlert, and M. M. Yoklavich (2008) Establishing climate-growth relationships for yelloweye rockfish (*Sebastes ruberrimus*) in the northeast Pacific using a dendrochronological approach. *Fisheries Oceanography* 17:368-379.
5. Yoklavich, M., D. Watters, and M. Love (2008) Keepers of the Deep: deep water marine debris research off the CA coast. Available online (<http://swfsc.noaa.gov/news.aspx?id=13064>) and DVD.
6. Love, M.S. and M. Yoklavich. (2008) Habitat characteristics of juvenile cowcod, *Sebastes levis* (Scorpaenidae), in Southern California. *Environ. Biol. Fish.* 82:195-202.
7. Starr, R. and M. Yoklavich. 2008. Monitoring MPAs in deep water off central California: 2007 IMPACT submersible baseline survey. CA Sea Grant College Program Publ. No. T-067: 1-22.
8. Yoklavich, M., M. Love, and K. Forney. (2007) A fishery-independent assessment of an overfished rockfish stock, cowcod (*Sebastes levis*), using direct observations from an occupied submersible. *Can. J. Fish. Aquat. Sci.* 64:1795-1804.
9. Love, M.S., M.M. Yoklavich, B.A. Black, and A.H. Andrews. (2007) Age of black coral (*Antipathes dendrochristos* Opresko, 2005) colonies, with notes on associated invertebrate species. *Bulletin of Marine Science* 80:391-400.

10. Anderson, T.J. and M.M. Yoklavich. (2007) Multi-scale habitat associations of deep-water demersal fishes off central California. *Fishery Bulletin* 105:168-179.
11. Copps, S., M. Yoklavich, G. Parkes, W. Wakefield, A. Bailey, H. G. Greene, C. Goldfinger, and R. Burns. (2007) Applying marine habitat data to fishery management on the US west coast: initiating a policy-science feedback loop. In: Todd, B. and H.G. Greene (eds.) *Mapping the seafloor for habitat characterization*. Geological Association of Canada, Special Paper 47.
12. Amend, M., M. Yoklavich, Y. Rhzanov, C. Grimes, and W. Wakefield. (2007) Mosaics of benthic habitats using laser line scan technology: it's in the details. In: Todd, B. and H.G. Greene (eds.) *Proceedings of GeoHab: Marine Geological and Biological Habitat Mapping*.
13. Allen, L., M. Yoklavich, G. Cailliet, and M. Horn. (2006) Bays and Estuaries. 119-148. In: Allen, Horn, and Pondella (eds.) *The Ecology of Marine Fishes: California and Adjacent Waters*. UC Press.
14. Baskett, M., M. Yoklavich, and M. Love. (2006) Predation, competition, and the recovery of overexploited fish species in marine reserves. *Canadian Journal Fisheries and Aquatic Sciences* 63:1214-1229.
15. Love, M. and M. Yoklavich. (2006) Deep Rock Habitats, 253-266. In: Allen, Horn, and Pondella (eds.) *The Ecology of Marine Fishes: California and Adjacent Waters*. UC Press.
16. Tissot, B.N., M.M. Yoklavich, M.S. Love, K. York, and M. Amend. (2006) Benthic invertebrates that form habitat on deep banks off southern California, with special reference to deep sea coral. *Fishery Bulletin* 104:167-181.
17. Yoklavich, M. and M. Love. (2005). Christmas tree corals: a new species discovered off southern California. *Current: The Journal of Marine Education* 21:27-30.
18. Yoklavich, M. (2005). Using video observations from submersibles and laser line scanners to survey benthic fishes, macro-invertebrates and habitat types in deepwater off California. 19-23. In: Somerton, D.A. and C.T. Glendhill (eds.) *Report of the NMFS Workshop on Underwater Video Analysis*. NOAA Tech. Memo. NMFS-F/SPO-68, 69 pp.
19. Black, B.A., G. W. Boehlert, and M. M. Yoklavich. (2005). Using tree-ring crossdating techniques to validate age in longlived fishes. *Canadian Journal of Fisheries and Aquatic Sciences* 62:2277-2284.
20. Anderson, T. J., M. M. Yoklavich, and S. L. Eittreim. (2005). Linking fine-scale groundfish distributions with large-scale seafloor maps: issues and challenges of combining biological and geological data. *American Fisheries Society Symposium* 41:667-678.

21. Starr, R.M., M.H.Carr, J. Caselle, J.A. Estes, C.Pomeroy, C.Syms, D.A. VenTresca, and M.M. Yoklavich. (2004). Review of the ecological effectiveness of subtidal marine reserves in central California. Part I.Synopsis of Scientific Investigations. Mar.Sanctuaries Conservation Series MSD-04-02, ([www.sanctuaries.noaa.gov/special/special.html#series](http://www.sanctuaries.noaa.gov/special/special.html#series)).
22. Starr, R.M., M.H.Carr, J. Caselle, J.A. Estes, C.Syms, D.A. VenTresca, and M.M. Yoklavich. (2004). Review of the ecological effectiveness of subtidal marine reserves in central California. Part II: Summary of Existing Marine Reserves in Central California and Their Potential Benefits. Marine Sanctuaries Conservation Series MSD-04-03. DOC-NOAA-MSD ([www.sanctuaries.noaa.gov/special/special.html#series](http://www.sanctuaries.noaa.gov/special/special.html#series)).
23. Brock, R. J., J.A. Bohnsack, M.J. Fogarty, S.A. Murawski, M.M. Yoklavich, and M.S. Love. (2003). Marine fisheries of the USA: moving from single-species management to a more holistic ecosystem-based approach. pp 521-531, IN: Beumer, J.P., A. Grant, and D.C. Smith (eds), Aquatic Protected Areas: What Works Best and How Do We Know?, University of Queensland Printery, St. Lucia, Queensland, Australia. 689pp.
24. Yoklavich, M., C. Grimes, and W.W. Wakefield. (2003). Using laser line scan imaging technology to assess deepwater seafloor habitats in the Monterey Bay National Marine Sanctuary. Marine Technology Society Journal 37:18-26.
25. Yoklavich, M., G. Cailliet, D. Oxman, J.P. Barry, and D.C. Lindquist. (2002). Fishes. In Caffrey, J., M. Brown, W.B. Tyler, and M. Silberstein (Eds.). Changes in a California Estuary: a Profile of Elkhorn Slough. 163-185 p.
26. Yoklavich, M.M., G.M. Cailliet, R.N. Lea, H.G. Greene, R. Starr, J.deMarignac, and J. Field. (2002). Deepwater habitat and fish resources associated with the Big Creek Ecological Reserve. CalCOFI Reports 43:120-140.
27. Love, M.S., M. Yoklavich and L. Thorsteinson. (2002). The Rockfishes of the Northeast Pacific. University of California Press. 405 pages.
28. Johnson, K.A., M.M. Yoklavich, and G.M. Cailliet. (2001). Recruitment of three species of juvenile rockfish (Sebastes spp.) on soft benthic habitats in Monterey Bay, California. CalCOFI Reports 42:153-166.
29. Yoklavich, M., H. G. Greene, G. Cailliet, D. Sullivan, R. Lea, and M. Love. (2000). Habitat associations of deep-water rockfishes in a submarine canyon: an example of a natural refuge. Fishery Bulletin, U.S. 98:625-641.
30. Parker, S., S. Berkeley, J.Golden, D. Gunderson, J.Heifetz, M.Hixon, R.Larsen, B.Leaman,M. Love, J.Musick, V.O'Connell, S.Ralston, H.Weeks,and M.Yoklavich. (2000). AFS Policy Statement: Management of Pacific Rockfish. AFS Fisheries 25(3):22-30.

31. Allee, R.J., M. Dethier, D. Brown, L. Deegan, R.G. Ford, T.F. Hourigan, J. Maragos, C. Schoch, K. Sealey, R. Twilley, M.P. Weinstein, and M. Yoklavich. (2000). Marine and estuarine ecosystem and habitat classification. NOAA Technical Memorandum NMFS-F/SPO-43. 43 p.
32. Greene, H.G., M.M. Yoklavich, R.M. Starr, V.M. O'Connell, W.W. Wakefield, D.E. Sullivan, J.E. McRea, Jr., and G.M. Cailliet. (1999). A classification scheme for deep seafloor habitats. *Oceanologica Acta* 22(6):663-678.
33. Murray, S., R. Ambrose, J. Bohnsack, L. Botsford, M. Carr, G. Davis, P. Dayton, D. Gotshall, D. Gunderson, M. Hixon, J. Lubchenco, M. Mangel, A. McCall, D. McArdle, J. Ogden, J. Roughgarden, R. Starr, M. Tegner, and M. Yoklavich. (1999). No-take reserve networks: sustaining fishery populations and marine ecosystems. *AFS Fisheries* 24(11):11-25.
34. Yoklavich, M. (Ed.) (1999). A continuing dialog on no-take reserves for resource management. *Proceedings of a 1998 CalCOFI Symposium*. *CalCOFI Reports* 40: 65-125.
35. Yoklavich, M. (Ed.) (1998). Marine harvest refugia for west coast rockfish: A workshop. NOAA Technical Memorandum NMFS, NOAA-TM-NMFS-SWFSC-255. 159 p.(also now available online at [www.pfeg.noaa.gov](http://www.pfeg.noaa.gov)).
36. Sladek Nowlis, J. and M. Yoklavich. (1998). Design criteria for rockfish harvest refugia from models of fish transport. p. 32-40. In: Yoklavich, M. (Ed.) *Marine Harvest Refugia For West Coast Rockfish: A Workshop*. NOAA Technical Memorandum NMFS, NOAA-TM-NMFS-SWFSC-255.
37. Yoklavich, M. (1998). Marine harvest refugia for west coast rockfish of North America, A workshop summary. *Environmental Conservation* 25(3):273.
38. Yoklavich, M., R. Starr, J. Steger, H.G. Greene, F. Schwing, and C. Malzone. (1997). Mapping benthic habitats and ocean currents in the vicinity of central California's Big Creek Ecological Reserve. NOAA Technical Memorandum, NOAA-TM-NMFS-SWFSC-245, 52 p.
39. Yoklavich, M.M. (1997). Applications of side-scan sonar and in situ submersible survey techniques to marine fisheries habitat research. p.140-141. In: Boehlert, G.W. and J.D. Schumacher, eds. *Changing oceans and fisheries: environmental data for fisheries research and management*. NOAA Tech. Memo. NOAA-TM-NMFS-SWFSC-239.146 pp.
40. Yoklavich, M., V. Loeb, M. Nishimoto, and B. Daly. (1996). Nearshore assemblages of larval rockfishes and their physical environment off central California during an extended El Nino event, 1991-1993. *Fishery Bulletin, U.S.* 94:766-782.
41. Harvey, J.T. and M. M. Yoklavich. (1996). Book Review: *Otolith Atlas of Southern African Marine Fishes*, by M.J. Smale, G. Watson, and T. Hecht. *Copeia*.1996(4):1061-1063.

42. Barry, J.P., M.M. Yoklavich, G.M. Cailliet, D.A. Ambrose, and B.S. Antrim. (1996). Trophic ecology of the dominant fishes in Elkhorn Slough, California, 1974-1980. *Estuaries* 19: 115-138.
43. Bailey, K., A. Brown, M. Yoklavich, and K. Mier. (1996). Interannual variability in growth of larval and juvenile walleye pollock (Theragra chalcogramma) in the western Gulf of Alaska, 1983-91. *Fisheries Oceanography* 5 (Suppl. 1): 137-147.
44. Yoklavich, M.M., G.M. Cailliet, G. Greene, and D. Sullivan. (1995). Interpretation of sidescan sonar records for rockfish habitat analysis: examples from Monterey Bay. Alaska Dep. Fish and Game Special Publication 9:11-14.
45. Greene, H.G., M.M. Yoklavich, D. Sullivan, and G. Cailliet. (1995). A geophysical approach to classifying marine benthic habitats: Monterey Bay as a model. Alaska Dep. Fish and Game Special Publication 9:15-30.
46. Greene, H.G., M.M. Yoklavich, J.P. Barry, D.L. Orange, D.E. Sullivan and G.M. Cailliet. 1994. Geology and related benthic habitats of Monterey Canyon, central California. (Abstract 051H-1) *EOS Trans. Amer. Geophys. Un.* 75:203.
47. Sullivan, D.E., H.G. Greene, M.M. Yoklavich, L.E. Browne, and G.M. Cailliet. 1994. The influence of biological activity on contemporary submarine erosion in Soquel Canyon, Monterey Bay, CA. (Abstract 051H-2) *EOS Trans. Amer. Geophys. Un.* 75:203.
48. Blood, D.M., A.C. Matarese, and M.M. Yoklavich. 1994. Embryonic development of walleye pollock, Theragra chalcogramma, from Shelikof Strait, Gulf of Alaska. *Fishery Bulletin, U.S.* 92:207-222.
49. Percy, W.G., J.P. Fisher, and M.M. Yoklavich. 1993. The biology of the Pacific pomfret (Brama japonica) in the Northeast Pacific Ocean. *Canadian Journal of Fisheries and Aquatic Sciences* 50:2608-2625.
50. Yoklavich, M.M., G.M. Cailliet, and G. Moreno. 1993. Rocks and fishes: submersible observations in a submarine canyon. *Proceedings of the American Academy of Underwater Sciences: 13th Annual Scientific Diving Symposium* pp. 173-181.
51. Bailey, K. M., R. D. Brodeur, N. Merati, and M. M. Yoklavich. 1993. Predation on walleye pollock (Theragra chalcogramma) eggs and yolk-sac larvae by pelagic crustacean invertebrates in the western Gulf of Alaska. *Fisheries Oceanography* 2:30-39.
52. Hinckley, S., K. Bailey, S. Picquelle, M. Yoklavich, and P. Stabeno. 1993. Age-specific mortality and transport of larval walleye pollock Theragra chalcogramma in the western Gulf of Alaska. *Marine Ecology Progress Series* 98:17-29.
53. Yoklavich, M. M., H. G. Greene, G. Moreno, G. M. Cailliet, D. Sullivan, D. Watters, and R. M. Love. 1992. The importance of small-scale refugia to deepwater rockfishes (Sebastes spp) - a pilot study in Soquel Canyon, Monterey Bay, CA. *EOS, Transactions, American Geophysical Union* (Abstr. 052A-01) *EOS-Trans. Amer. Geophys. Union* 73:318.

54. Yoklavich, M. M., M. Stevenson and G. M. Cailliet. 1992. Seasonal and spatial patterns of ichthyoplankton abundance in Elkhorn Slough, California. *Estuarine, Coastal Shelf Science* 34:109-126.
55. Yoklavich, M. M., G. M. Cailliet, J. P. Barry, D. A. Ambrose and B. S. Antrim. 1991. Spatial and temporal patterns in abundance and diversity of fish assemblages in Elkhorn Slough, California. *Estuaries* 14:465-480.
56. Ramer, B., G. Page, and M. Yoklavich. 1991. Feeding ecology and spatial and temporal patterns in abundance of shorebirds in Elkhorn Slough, CA. *Western Birds* 22: 157-174.
57. Yoklavich, M. M. and G. W. Boehlert. 1991. Uptake and utilization of  $^{14}\text{C}$ -glycine by Sebastes melanops embryos. *Environmental Biology of Fishes* 30:147-153.
58. Shimizu, M., M. Kusakari, M. M. Yoklavich, G. W. Boehlert, and J. Yamada. 1991. Ultrastructure of the epidermis and digestive tract in Sebastes embryos, with special reference to the uptake of exogenous nutrients. *Environmental Biology of Fishes* 30:155-163.
59. Yoklavich, M. M. and K. M. Bailey. 1990. Hatching period, growth and survival of larval walleye pollock Theragra chalcogramma as determined from otolith analysis. *Marine Ecology Progress Series* 64:13-23.
60. Hinckley, S., K. M. Bailey, S. J. Picquelle, M. M. Yoklavich and J. D. Schumacher. 1990. Realistic estimation of mortality rates of larval walleye pollock in the Gulf of Alaska as determined from field sampling. *EOS, Transactions, American Geophysical Union* 71:93.
61. Yoklavich, M. M. and E. K. Pikitch. 1989. Reproductive status of Dover sole, Microstomus pacificus, off northern Oregon. *Fishery Bull.*, U.S. 87:988-995.
62. Boehlert, G. W., M. M. Yoklavich, and D. B. Chelton. 1989. Time series of growth in the genus Sebastes from the northeast Pacific ocean. *Fishery Bulletin*, U.S. 87:791-806.
63. Yoklavich, M. M. and K. M. Bailey. 1989. Growth of larval and juvenile walleye pollock from Shelikof Strait, Gulf of Alaska, as determined from daily increments in otoliths. In: *Proceedings of the International Symposium on the Biology and Management of Walleye Pollock*. p. 241-252. Univ. Alaska, Fairbanks, Sea Grant Report No.89-1.
64. Yoklavich, M. M. and G. W. Boehlert. 1987. Daily growth increments in otoliths of juvenile black rockfish, Sebastes melanops: an evaluation of autoradiography as a new method of validation. *Fishery Bulletin*, U.S. 85:826-832.
65. Kendall, A. W., M. E. Clarke, M. M. Yoklavich, and G. W. Boehlert. 1987. Distribution, feeding, and growth of larval walleye pollock, Theragra chalcogramma, from Shelikof Strait, Gulf of Alaska. *Fishery Bulletin*, U.S. 85:499-521.
66. Boehlert, G.W. and M.M. Yoklavich. 1986. Long-term cycles of growth in Sebastes: Extracting information from otoliths. In:



- Proceedings of the International Rockfish Symposium. Univ. Alaska, Fairbanks, Sea Grant Publ. 87-2:197-207.
67. Boehlert, G.W. and M.M. Yoklavich. 1985. Larval and juvenile growth of sablefish, Anoplopoma fimbria, as determined from otolith increments. Fishery Bulletin, U.S. 83:475-481.
  68. Boehlert, G.W. and M.M. Yoklavich. 1984. Reproduction, embryonic energetics, and the maternal-fetal relationship in the viviparous genus Sebastes (Pisces, Scorpaenidae). Biol. Bulletin 167:354-370.
  69. Boehlert, G.W. and M.M. Yoklavich. 1984. Carbon assimilation as a function of ingestion rate in larval Pacific herring, Clupea harengus pallasii. J. Experimental Marine Biol. and Ecol. 79:251- 262.
  70. Boehlert, G.W. and M.M. Yoklavich. 1984. Variability in age estimates in Sebastes as a function of methodology, different readers, and different laboratories. CA Dep. Fish Game 70:210-224.
  71. Boehlert, G.W. and M.M. Yoklavich. 1983. Effects of temperature, ration, and fish size on growth of juvenile black rockfish, Sebastes melanops. Environmental Biology of Fishes 8:17-28.
  72. Yoklavich, M.M. 1982. Growth, food consumption, and conversion efficiency of juvenile English sole (Parophrys vetulus). In: G.M. Cailliet and C.A. Simenstad (eds.). Fish food habit studies, Proceedings of third Pacific workshop, 1981. WSG-WO 82-2:97-106.

#### REPORTS:

- NMFS. In Review. Our living oceans. The status of habitats of U.S. living marine resources, 2007. U.S. Dep. Commer., NOAA Tech. Memo. NMFS-F/SPO-75 (lead author on West Coast Chapter).
- Goldfinger, C., C. Romsos, J. Chaytor, M. Yoklavich, M. Amend, W. Wakefield, and L. Huffnagle. 2005. Multibeam sonar surveys and habitat mapping of the seafloor within the Cowcod Conservation Areas, Southern California Continental Borderland. Final Report to NOAA Fisheries, Santa Cruz Laboratory.
- Yoklavich, M., M. Love, and K. Forney. 2004. A fishery independent assessment of cowcod (Sebastes levis) in southern California's Cowcod Conservation Areas using direct observations from an occupied submersible. Report to the Cowcod Assessment Independent Review Panel, Southwest Fisheries Science Center, La Jolla, CA.
- Yoklavich, M.M., G.M. Cailliet and R.N. Lea. (2001). Deepwater habitat and fish resources associated with a marine ecological reserve: implications for fisheries management. Final Report to Marine Ecological Research Reserve Program, UC Sea Grant College System. 108 p. (Available on CD)
- Greene, H.G., M. Yoklavich, R. Kvitek, and N. Maher. 2001. Mapping rockfish habitats of the Monterey Bay National Marine Sanctuary. In: Carless, J. (Ed.) Ecosystem Observations, Annual Rept. Monterey Bay National Marine Sanctuary.
- Parrish, R., J. Seger, and M. Yoklavich. 2000. Marine reserves to supplement management of west coast groundfish resources: Phase I

Technical Analysis. Prepared for The Pacific Fishery Management Council, Portland, OR. 47 p.

Yoklavich, M. and G. Cailliet. 1999. Changing habitats and associated fish assemblages of Elkhorn Slough. p.13. In: Carless, J. (Ed.) Ecosystem Observations, Annual Rept. Monterey Bay National Marine Sanctuary.

Yoklavich, M., D. Ventresca, and C. Pomeroy. 1998. Research on rockfishes, habitats, and the fishery at Big Creek Ecological Reserve. p. 7-8. In: Carless, J. (Ed.) Ecosystem Observations, Annual Rept. Monterey Bay National Marine Sanctuary.

Yoklavich, M., Langton, R., Wakefield, W. 1998. In Situ Sampling. A white paper submitted to the NMFS/OAR Advanced Technology Workshop, Dec 15-17, 1998, Miami, FL. 8 p.

Schmitt, C. L. Crockett, Y. DeReynier, J. Glock, M. Helvey, B. Meyer, and M. Yoklavich. 1998. Proposed Recommendations: Essential Fish Habitat For Pacific Coast Groundfish. NOAA-NMFS, Seattle, WA.

#### **PROPOSALS FUNDED:**

Yoklavich, M. Assessing deep-water corals using archived video surveys. Sponsor: NOAA/Deep Sea Coral Program (\$15K: 2009)

Grimes, C. and Yoklavich, M. California Seafloor Mapping Project: Groundtruthing Habitats. Sponsor:NOAA/NMFS/Habitat Conservation (\$99.7K: 2008)

Yoklavich, M. and D. Watters. Assessing change in derelict fishing gear and other marine debris in deepwater benthic habitats within the Monterey Bay National Marine Sanctuary.Sponsor:NOAA Marine Debris Program (\$39.4K: 2008)

Starr, R. and M. Yoklavich. Baseline surveys of deepwater demersal communities in and near central California MPAs. Sponsor: Ocean Protection Council/CDFG/UC Sea Grant (\$787K:2007; \$900K:2008)

Yoklavich, M. and D. Watters. An Assessment of derelict fishing gear and other marine debris in deepwater benthic habitats off California. Sponsor: NOAA Marine Debris Program (\$45K: 2007)

Yoklavich, M. Reducing Fishing Impacts to Essential Fish Habitats. Sponsor: NOAA NMFS Habitat Conservation (\$22.5K: 2006; \$32K: 2007)

Yoklavich, M., S. Copps, et al. Analytical Framework and Risk Assessment Tools for Pacific Coast Groundfish Essential Fish Habitat. Sponsor: NOAA Fisheries (\$75K, 2004)

Love, M. and M. Yoklavich. Laying the Scientific Foundation to Evaluate Ecological Recovery in the Largest and Newest Marine Protected Area on the West Coast. Sponsor: NOAA NURP (\$210K:2002)

Love, M. and M. Yoklavich. A Fish and Habitat Survey Essential to the Rebuilding of Overfished Groundfish Populations along the West Coast. Sponsor: Packard Foundation (\$250K:2001)

Yoklavich, M. and C. Grimes. Using lasers to explore seafloor habitats. Sponsor:NOAA Office Ocean Exploration (\$100K: 2002)

Yoklavich, M. and C. Grimes. Evaluating electro-optic imaging technology to characterize essential groundfish habitats and detect impacts of fishing. Sponsor: NOAA NURP (\$200K: 2001)

Yoklavich, M. and M. Love. Identifying habitat areas of particular concern to assist in rebuilding the bocaccio population off central and southern California. Sponsor: NOAA NMFS/Protected Resources (\$49.5K: 2000)

Wakefield, W., R. Embley, B. Tissot, and M. Yoklavich. Combining historical data, high resolution seafloor imagery, and new survey and analysis techniques in fisheries habitat studies off Oregon. Sponsor: NOAA NURP (\$343K: 2000-2002)

Greene, H.G., G. Cailliet, R. Kvitek, M. Yoklavich, C. Grimes, R. Starr and P. Barnes. Fisheries habitat characterization of the California continental margin: identification, quantification, and synthesis of existing information. Sponsor: NOAA National Sea Grant (\$495K: 2000-2002)

Yoklavich, M., G. Cailliet and R. Lea. Deepwater habitat and fish resources associated with a marine ecological reserve: implications for fisheries management. Sponsor: Marine Ecological Research Reserve Prog. Sponsor: UC Sea Grant College System (\$203K: 1997-2000)

Yoklavich, M., G. Cailliet, R. Lea. Seasonal comparisons of deepwater habitats and fishes in Big Creek Ecological Reserve. Sponsor: Sustainable Seas Expeditions and NOAA Sanctuary Program (\$80K: 1999)

Yoklavich, M. Evaluating marine harvest refugia to manage, protect, and conserve rockfish populations and biodiversity on the west coast. Sponsor: NOAA NMFS/Protected Resources (\$38K: 1997)

Yoklavich, M., R. Starr, and H. G. Greene. Mapping benthic habitats in the Monterey Bay National Marine Sanctuary's Big Creek Ecological Reserve and adjacent coast. Sponsor: NOAA Monterey Bay National Marine Sanctuary (\$50.5K: 1996)

Yoklavich, M. and G. Cailliet. The importance of small-scale refugia to deepwater rockfishes in the Monterey Bay submarine canyon system and adjacent areas off central CA. Sponsor: National Underseas Research Prog., West Coast NURC (\$214K: 1993-5)

Cailliet, G.M. and M. Yoklavich. The importance of small-scale refugia to deepwater rockfishes (Sebastes sp) - a pilot study in Monterey Bay, CA. Sponsor: National Underseas Research Program, West Coast NURC (\$70K: 1992).

Loeb, V., M. Yoklavich, G. Cailliet. The importance of transport processes in recruitment of rockfishes (Genus Sebastes) to nearshore areas of Monterey Bay, CA. Sponsor: University of California Sea Grant College System (\$77K: 1991-1993).

#### **INVITED PRESENTATIONS (1993-2007):**

Twenty years of research on demersal communities using the Delta submersible. Marine Habitat Technology for Alaska (April 2007)

A fishery independent assessment of cowcod using habitat maps and direct observation from a manned submersible. CA and World Oceans '06 Conference (September 2006)

Current programs and future direction of research on offshore demersal habitats at the SWFSC. NMFS Advanced Sampling Technologies Workshop on Essential Offshore Habitats (August 2006)

An update on California's MLPA process. NMFS MPA-Fishery Working Group (July 2006)

A fishery independent assessment of cowcod using habitat maps and direct observation from a manned submersible. NMFS National Stock Assessment Workshop (April 2006)

Using video and direct observations from manned mini-submersibles to survey fishes and habitats on the seafloor. AFS Annual Meeting, Symp. Using Video for Fishery Applications. (September 2005)

Surveying rockfishes in deep waters of the Channel Islands. Channel Islands Natl Park and Channel Islands Natl Marine Sanctuary 'From Shore to Sea' Lecture Series. Santa Barbara and Ventura (July 2005).

Seafloor mapping and visual surveys to improve assessments of groundfish species. USGS-NMFS Research Symposium, Santa Cruz (July 2005).

Research on deep water fishes and habitats off California. Centro de Investigacion Cientifica Y de Educacion Superior Encenada (CICESE) Departmental Seminar. Encenada, Baja CA. (June 2005).

Using video observations from submersibles and laser line scanners to survey benthic fishes, macro-invertebrates and habitat types in deepwater off California. NMFS Workshop on Underwater Video Analysis. (May 2005).

Planning for and Designing Networks of Marine Protected Areas on the California Coast. Moss Landing Marine Labs. Graduate Class "Conservation Biology of Marine Vertebrates" (May 2005).

A Fishery Independent Assessment of Cowcod In Southern California's Cowcod Conservation Areas Using Direct Observations from an Occupied Submersible. PFMC STAR panel meeting. Long Beach, CA (May 2005).

The Status of the draft EIS for Essential Fish Habitat of West coast Groundfish. Monterey Bay National Marine Sanctuary Research Activity Panel Meeting. (April 2005).

A Fishery Independent Assessment of Cowcod In Southern California's Cowcod Conservation Areas Using Direct Observations from an Occupied Submersible. Independent Review Panel, Southwest Fisheries Science Center, La Jolla, CA. (December 2004).

Lights, Cameras, Action...using video and manned mini-submersibles to count rockfishes in their own backyard. Annual AAAS Meeting. Washington DC (November 2004).

Expedition into the deep: counting rockfishes in their own backyard. University of California Davis, Bodega Marine Lab. (October 2004)

University of Oregon Institute Marine Biology (June 2004)

Friends of Moss Landing Marine Labs Lecture Series (March 2004)

Laser line scan to survey benthic habitats in the Monterey Bay National Marine Sanctuary. Oceans 2003, San Diego, CA (Sept 2003)

Submarine Canyons as Refugia for Overfished Species. The Biogeography of Seamounts and Submarine Canyons: A Census of Marine Life Workshop, Newport, OR (August 2003)

Scientific Foundation to Evaluate Ecological Recovery in California's Cowcod Conservation Areas, 133rd Annual Meeting of American Fisheries Society, Quebec City, Canada (August 2003).

Survey techniques for deepwater fishes. Moss Landing Marine Laboratories, Deepsea Ecology Seminar Class (November 2002)

NMFS Essential Fish Habitat Research on the West Coast. California's Artificial Reef Enhancement Workshop, Huntington Beach (Nov. 2002)

Fish assemblages and habitats in the Big Creek Ecological Reserve and improving its role within an effective network of MPAs for California. American Institute of Fishery Research Biologists-Northern CA District, San Jose, CA (March 2002)

Draft Concept of MPA Network for the South-Central California Coast. Marine Life Protection Act Public Workshops, Seaside and Morro Bay CA (July 2001)

Progress and plans for MPAs on the West Coast. Marine Conservation Biology Institute 2nd Annual Meeting, San Francisco, CA (June 2001)

Marine Protected Areas for California. Moss Landing Marine Laboratories, Marine Fisheries Seminar Class (October 2000)

Marine Reserves: Phase I Technical Analysis. Pacific Fisheries Management Council, Portland, OR (April 2000).

Deepwater Habitats in Marine Protected Areas. AFS California-Nevada 34th Annual Meeting, Plenary Session "Essential Marine and Freshwater Habitats". Ventura, CA (March 2000).

Deepwater Habitats and Harvest Refugia for West Coast Rockfishes. 80th Annual Meeting of Western Society of Naturalists, Symposium "Marine Reserves: Tools for Sustaining Marine Ecosystems and Fishery Populations". Monterey, CA (December 1999).

Marine Reserves to Conserve Rockfishes on the West Coast. University of Washington, Fisheries Departmental Seminar, Seattle (September 1999)

Adding Depth (Z) to the Discussion of Marine Reserves. NRC Ocean Studies Board, Monterey, CA (May 1999).

Habitats and distribution of bocaccio rockfish. Pacific Fisheries Management Council, Sacramento, CA (April 1999).

An Introduction to A Continuing Dialog on No-take Reserves for Resource Management. CalCOFI Annual Meeting, Pacific Grove, CA (November 1998).

Marine Reserves: Research and Fisheries Management. American Cetacean Society, Monterey Bay Chapter. Hopkins Marine Station, CA (October 1998).

Biological Integrity of Temperate Eastern Pacific Benthic Fish Communities, 128th Annual Meeting of American Fisheries Society, Hartford, CT (August 1998).

Deepwater fishes and their habitats in and around the Big Creek Marine Ecological Reserve, Fred Farr Research Symp., Landels-Hill Big Creek Reserve, CA (July 1998).

Using Geophysical Techniques to Address the Research Needs For West Coast Groundfish Habitats, USGS/NOAA Workshop "Relating Geology of Benthic Habitats to Biological Resources", Reston, VA (May 1998).

Marine harvest refugia for west coast rockfishes, Pacific Fisheries Management Council Panel, Portland, OR (April 1998).

Status of stocks and summary of workshop on marine harvest refugia for west coast rockfishes, World Wildlife Fund Annual Meeting and Marine Leadership Committee, Monterey Bay Aquarium, CA (April 1998).

NMFS's Efforts On Essential Fish Habitat, CA Fish Game, Monterey (March 1998).

Sensing essential benthic fish habitats in deep water. Marine Benthic Habitats Conference, Noumea, New Caledonia (November 1997).

Coastal Rockfish Biology and Fisheries. Humboldt Chapter of American Fisheries Society. Humboldt State University, CA (October 1997).

Sensing Essential Fish Habitats In Deep Water. Annual Meeting of American Fisheries Society: Special Symp. "Innovative Technologies For Fisheries Applications", Monterey, CA (August 1997).

Rockfish Refuges In Deepwater Canyons. Annual Meeting of the Pacific Division AAAS: Special Symp. "Research in Support of Sanctuaries and Reserves", San Jose State University, CA (June 1996).

Shallow water organisms and habitats. West Coast National Undersea Research Center: Monterey Bay Research Initiative Workshop, Moss Landing, CA (May 1996).

Coastal rockfishes: surviving to old age in a sea of technology. The Friends of Long Marine Laboratory 4th Annual Marine Science Lecture Series: "Beneath the Surface", Santa Cruz, CA (October 1995).

The Importance of small-scale refugia to deepwater rockfishes: a pilot study in Soquel Canyon, Monterey Bay, CA. Special symposium "Application of In Situ Technology in Fisheries Research - With an Emphasis on Direct Observation", Amer.Fish. Soc. Annual Meeting, Portland, OR (August 1993).

Long-term variability in growth of rockfishes and their environment. International Symposium Fish Otolith Research and Application, Hilton Head, SC (January 1993).

#### **OTHER PRESENTATIONS (1993-2008):**

Spatial and temporal variability in growth of yelloweye rockfish. (Black, Boehlert, Yoklavich) 15<sup>th</sup> Western Groundfish Conference, Santa Cruz, CA (February 2008).

Fishing intensity and abundance of megafaunal invertebrates within Monterey Bay National Marine Sanctuary. (Graiff, Tissot, Yoklavich). 15<sup>th</sup> Western Groundfish Conference, Santa Cruz, CA (February 2008).

Demersal fish and habitat off central CA from in situ observations. (Laidig, Watters, Yoklavich) 15<sup>th</sup> Western Groundfish Conference, Santa Cruz, CA (February 2008).

Abundance and distribution of megafaunal invertebrates in the new central CA MPAs. (Tissot, Starr, Yoklavich, et al.) 15<sup>th</sup> Western Groundfish Conference, Santa Cruz, CA (February 2008).

Assessment of derelict fishing gear and marine debris in deepwater. (Watters, Yoklavich, Love) 15<sup>th</sup> Western Groundfish Conference, Santa Cruz, CA (February 2008).

Assessing some sources of uncertainty associated with visual surveys of benthic fishes using an occupied submersible. 14<sup>th</sup> Western Groundfish Conference. Newport, OR (January 2006).

Predation, competition, and the recovery of overexploited fish stocks in marine reserves (Baskett, Yoklavich, Love). 14<sup>th</sup> Western Groundfish Conference. Newport, OR (January 2006).

Otoliths, tree rings, and climate: long-term growth reconstructions and effects of ocean variability on splitnose rockfish (Black, Boehlert, Yoklavich). 14<sup>th</sup> Western Groundfish Conference. Newport, OR (January 2006).

Comparison of fish assemblages from paired longline and submersible surveys (Laidig, Yoklavich, Pearson). 14<sup>th</sup> Western Groundfish Conference. Newport, OR (January 2006).

Comparison of 1993 and 2004 submersible surveys off Monterey, CA (Starr, Yoklavich, Burton, deMarignac, Greenley, Snook). 14<sup>th</sup> Western Groundfish Conference. Newport, OR (January 2006).

Abundance and distribution of megafaunal invertebrates in submarine canyons and their ecological associations with groundfish (Bianchi, Tissot, Yoklavich). 14<sup>th</sup> Western Groundfish Conference. Newport, OR (January 2006).

Importance of large invertebrates as components of fish habitat: a synthesis of results from Pacific continental shelves (Tissot, Yoklavich, Love, Wakefield). 14<sup>th</sup> Western Groundfish Conference. Newport, OR (January 2006).

Evaluating Recovery in the Cowcod Conservation Areas off Southern California. 13<sup>th</sup> Western Groundfish Conference. Victoria, British Columbia (February 2004).

Laser line scan technology to characterize deepwater habitats and associated organisms. GeoHab: Marine Geological Habitat Mapping Conference, Moss Landing, CA (May 2002).

SFS Overfishing Status vs. ESA Threatened/Endangered Listing As Applied to West Coast Groundfish. F/PR Candidate Species Workshop, Silver Spring, MD (August 2001).

Progress and Plans for Marine Protected Areas on the West Coast. F/PR Candidate Species Workshop, Silver Spring, MD (August 2001).

Deepwater Benthic Fish and Habitat Associations with a Marine Reserve off Central California. 11<sup>th</sup> Western Groundfish Conference, Sitka, AK (April 2000).

Mapping Fish Habitats and Ocean Currents in Ecological Reserves. National Ocean Conference, Monterey, CA (June 1998).

Mapping Fish Habitats and Ocean Currents in Ecological Reserves. Western Groundfish Conference, Pacific Grove, CA. (February 1998).

Mapping benthic habitats and ocean currents in the vicinity of a marine protected area. Marine Benthic Habitats Conference, Noumea, New Caledonia (November 1997).

A geophysical approach to studying fish habitat: an example from Monterey Bay. Tiburon Laboratory NMFS, Winter Seminar Series, Tiburon, CA (November 1994).

Using sidescan sonar to evaluate rockfish habitat: example from Monterey Bay. Special workshop "Applications of sidescan sonar and laser line systems in fisheries research", Western Groundfish Conf., Nanaimo, B.C. (January 1994).

Rocks and fishes: submersible observations in a submarine canyon. American Academy of Underwater Sciences: 13th Annual Scientific Diving Symposium, Monterey CA (September 1993).